

Set	Items	Description
S1	229926	VESSEL? OR VEIN? OR VENOUS? OR ARTER? OR VASCUL? OR ENDOVA- SCUL?
S2	1499219	APERTUR? OR HOLE? OR OPENING? OR ANASTOMA? OR STOMA OR STO- MAS OR STOMAE OR VENIPUNCTUR?
S3	437088	PASSAG? OR BREACH? OR PUNCTUR? OR PERFORAT? OR ORIFIC?
S4	1465863	CLOSE? OR CLOSUR? OR CLOSING? OR SEAL? OR SHUT? OR FUSE? OR FUSI?
S5	245729	CLIP? OR PATCH? OR PLUG? OR ELONGAT?()MEMBER? OR PADDLE?
S6	1025471	OCCLU? OR BLOCK? OR REPAIR? OR REPARAT? OR MEND?
S7	54620	SYRING? OR HYPODERM? OR INTRAVEN?
S8	3512577	COUPL? OR ATTACH? OR CONNECT?
S9	1805941	THREAD? OR SCREW? OR SECUR? OR FASTEN? OR JOIN? OR LINK?
S10	87235	NEEDL?
S11	639908	PLUNGER? OR PISTON? OR PUSHER? OR PUSHING? OR PLUNGING? OR SLID?(2N) (ROD OR RODS OR CYLIND?) OR INJECT?
S12	2284284	FORCE? OR PRESSUR? OR COMPRESS? OR PRESS? OR PUSH? OR EXER- T?
S13	2445695	FLUID? OR LIQUID? OR WATER? OR AQUEOUS? OR DRUG? OR MEDICA- T? OR MEDICAMENT? OR PHARMACEUT OR SERA OR SERUM?
S14	1548773	PLACE? OR PLACING? OR LOCAT? OR SITUAT? OR EMPLAC? OR IMPL- AC?
S15	679509	INSERT? OR INFIX? OR INTUBAT?
S16	4134251	DEVIC? OR APPARAT? OR TOOL? ? OR INSTRUMENT? OR IMPLEMENT? OR APPLIANC? OR EQUIPMENT? OR UTENSIL?
S17	2376814	METHOD OR METHODS
S18	2121031	SYSTEM OR SYSTEMS
S19	1615030	PROCESS OR PROCESSES
S20	160692	PROCEDURE OR PROCEDURES
S21	122635	TECHNIQUE OR TECHNIQUES
S22	216320	MODE OR MODES
S23	232565	IC=(A61M? OR A61B?)
S24	2939	S1(5N)S2:S3 AND S4:S6(5N)S2:S3
S25	1999	S24 AND S16:S23
S26	2939	S24:S25
S27	53	S26 AND S7
S28	51	S27 AND S8:S15
S29	19533	S16:S22(5N)S14:S15 AND S1:S3 AND S4:S6
S30	266	S29 AND S7
S31	204	S30 AND S10:S12
S32	120	S31 AND S23
S33	86	S32 AND S13
S34	88	S32 AND S8:S9
S35	166	S27:S28 OR S32:S34
S36	166	IDPAT (sorted in duplicate/non-duplicate order)

? show files

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200475

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36/3,K/7

DIALOG(R)File 350:Derwent WPIX  
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016374598     \*\*Image available\*\*  
WPI Acc No: 2004-532505/200451  
Related WPI Acc No: 2003-167048  
XRAM Acc No: C04-195797  
XRPX Acc No: N04-421680

LATE  
DATE

Intravenous catheter and needle assembly for intravenous needle insertion, comprises sealed catheter assembly engaged with needle assembly, and securement unit configured to removably secure catheter assembly to needle assembly

Patent Assignee: EXPRESS EXQUISITE (EXPR-N)

Inventor: EAST D M

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6764468	B1	20040720	US 2001901228	A	20010709	200451 B
			US 2002271130	A	20021015	

Priority Applications (No Type Date): US 2002271130 A 20021015; US 2001901228 A 20010709

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6764468	B1	13	A61M-005/32	CIP of application US 2001901228

Intravenous catheter and needle assembly for intravenous needle insertion, comprises sealed catheter assembly engaged with needle assembly, and securement unit configured to removably secure catheter assembly to needle assembly

Abstract (Basic):

...     A sealed sterile intravenous catheter and needle assembly comprises sealed catheter assembly (SCA) (20) engaged with needle assembly (60), securement unit configured to removably secure SCA to the needle assembly. A gel cap portion (25) is configured to seal distal end of SCA while permitting needle (30) of the needle assembly to pierce through central axis of the cap portion (12) and into hollow flow passageway of SCA.

...     A sealed sterile intravenous catheter and needle assembly comprises a sealed catheter assembly (SCA) removably secured and configured for cooperative engagement with a needle assembly, securement unit configured to removably secure SCA to the needle assembly. SCA formed in a generally elongate tubular configuration with a hollow flow passageway extends partially. A gel cap portion is configured to seal distal end of SCA while permitting needle of the needle assembly to pierce through central axis of the cap portion and into the hollow flow passageway of SCA...

...For intravenous needle insertion...

...The sealed sterile intravenous catheter and needle assembly (device) provides a closed and sterile environment for intravenous access to the patient. The device reduces bleeding associated with intravenous needle usage, and reduces anxiety and trauma resulting from the sight of blood leakage. The device...

...risk of exposing healthcare workers to potential infection arising from contact with patient blood. The device permits insertion of needle assembly in a closed sterile system. The device is compatible for

use with **needle** -less **syringes** . The device eliminates the need for healthcare professionals to perform additional step of **securing** the gel cap assembly in place after **inserting** the catheter assembly. The **device** eliminates the need for healthcare professionals to apply constant and continuous **pressure** to the patient near the **puncture** point of **intravenous** catheter and **needle** assembly. The device is cost-effective...

...The figure shows the side view of **sealed** sterile **intravenous** catheter and **needle** assembly with the cap and **sealed** catheter assembly separated from the **needle** assembly...

... **sealed** catheter assembly (20...

... **sealed** flow **passageway** (23...

... **threads** (27...

... **needle** (30...

...cooperating **threads** (44...

... **needle** assembly (60

Technology Focus:

... portion (22) and catheter nozzle portion (24) aligned axially at central axis to form a **sealed** flow **passageway** (23). The gel cap portion has hollow gel cap hub (26) and gel cap (28...

...formed of an elastic material configured to matingly correspond to the gel cap hub and **seal** the gel cap portion of the **sealed** catheter. The **needle** of the **needle** assembly is configured to matingly cooperate with the **sealed** catheter assembly such that the **needle** will pierce through the gel cap portion and into the **sealed** flow **passageway** of the **sealed** catheter assembly in a fully extended position. The **needle** assembly further comprises an elongate outer barrel (40) **securing** the **needle** . The outer barrel is slidably mounted on an inner barrel (50) such that movement of the outer barrel relative to the inner barrel will retract the **needle** within the inner barrel for safe disposal. The **needle** assembly further comprises locking unit configured to lock the **needle** in a fully retracted position. The locking unit comprises a locking slot (54) disposed on...

...to cooperatively mate with a locking tab (48) on the outer barrel to engage the **needle** in a fully retracted position. The **securement** unit has **threads** (27) disposed on SCA configured to removably engage cooperating **threads** (44) on the **needle** assembly. SCA and the gel cap portion are configured as a one-piece unitary unit...

...gradually in a direction extending axially away from the tubular catheter portion. The catheter and **needle** assembly further has retracting unit configured to retract the **needle** from the **sealed** flow **passageway** into a fully retracted position. The gel cap hub of SCA has **threads** structured to engage cooperating **threads** on the **needle** assembly. SCA is configured to be easily adapted for **needle** -less **connection** .

Title Terms: **INTRAVENOUS** ;

International Patent Class (Main): **A61M-005/32**

36/3,K/16

DIALOG(R)File 350:Derwent WPIX

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015997958 \*\*Image available\*\*

WPI Acc No: 2004-155808/200415

Related WPI Acc No: 2003-440969; 2004-155809; 2004-642152

XRAM Acc No: C04-061860

XRPX Acc No: N04-124707

*Late Date*

**Delivery system for delivering hemostasis promoting material to blood vessel puncture , has control tip inserted through introducer sheath to locate and occlude puncture site and hydration chamber for receiving and delivering material**

Patent Assignee: SUB-Q INC (SUBQ-N); ASHBY M (ASHB-I); SING E C (SING-I); URQUIDI L (URQU-I)

Inventor: ASHBY M; SING E C; URQUIDI L

Number of Countries: 105 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040019328	A1	20040129	US 20017204	A	20011108	200415 B
			US 2002256493	A	20020926	
WO 200428588	A2	20040408	WO 2003US30514	A	20030926	200425
AU 2003276995	A1	20040419	AU 2003276995	A	20030926	200462

Priority Applications (No Type Date): US 2002256493 A 20020926; US 20017204 A 20011108

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20040019328 A1 42 A61M-005/178 CIP of application US 20017204

WO 200428588 A2 E A61M-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003276995 A1 A61M-005/178 Based on patent WO 200428588

**Delivery system for delivering hemostasis promoting material to blood vessel puncture , has control tip inserted through introducer sheath to locate and occlude puncture site and hydration chamber for receiving and delivering material**

Abstract (Basic):

... A delivery **system** for delivering hemostasis promoting material to a blood **vessel puncture** (108) to facilitate hemostasis, includes an introducer sheath (10); a hydration chamber (12) to receive...

...a second diameter larger than the first diameter. The hydration chamber has a proximal end **connected** to a **syringe** (18).

... For delivering hemostasis promoting material to a blood **vessel puncture** to facilitate hemostasis (claimed...

...The inventive delivery **system** accurately **locates** the blood **vessel** wall at a **puncture** site and for properly **placing** a hemostasis **plug** over the **puncture** site...

...The figure is a side cross sectional view of the blood **vessel** **puncture** site with the hemostasis promoting material delivered to the

blood vessel puncture site by fluid pressure .

...

... Syringe (18...

...Blood vessel puncture (108

Technology Focus:

... INSTRUMENTATION AND TESTING...

...chamber has two inner diameters, and a tapered portion between the two inner diameters for **compressing** the hemostasis promoting material.

The second inner diameter is the same as an inner diameter of the introducer sheath. An exhaust vent is in **fluid connection** with a distal end of the introducer sheath for providing a bleed back indication of position. It can be opened and **closed** by a cap (28), a valve, or a stopcock.

...Title Terms: **SYSTEM** ;

International Patent Class (Main): **A61M-000/00** ...

... **A61M-005/178**

36/3,K/19

DIALOG(R)File 350:Derwent WPIX  
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*THIS APPLICATION*

015895151 \*\*Image available\*\*

WPI Acc No: 2004-052990/200405

Related WPI Acc No: 2001-244672; 2003-167058; 2003-607540; 2003-635247

XRPX Acc No: N04-042962

Locating method for vessel lumen, involves detecting movement of  
plunger of syringe to eject fluid to determine entry of elongated  
instrument into vessel lumen

Patent Assignee: REX MEDICAL (REXM-N)

Inventor: BRIGANTI R T; HINCHLIFFE P W J; MCGUCKIN J F; PETERS W H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040002681	A1	20040101	US 99153736	P	19990913	200405 B
			US 2000659648	A	20000912	
			US 2002355526	P	20020206	
			US 2002163142	A	20020605	
			US 2003609027	A	20030627	

Priority Applications (No Type Date): US 2003609027 A 20030627; US 99153736  
P 19990913; US 2000659648 A 20000912; US 2002355526 P 20020206; US  
2002163142 A 20020605

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040002681	A1		38	A61M-005/00	Provisional application US 99153736

Div ex application US 2000659648  
Provisional application US 2002355526  
Div ex application US 2002163142

Locating method for vessel lumen, involves detecting movement of  
plunger of syringe to eject fluid to determine entry of elongated  
instrument into vessel lumen

Abstract (Basic):

... The method involves connecting a syringe, which has a  
plunger and containing fluid, to an elongated instrument. A force  
is exerted on the plunger as it is inserted through a tissue  
towards a vessel wall. The movement of the plunger is detected to  
eject the fluid to determine the entry of the elongated instrument  
into the vessel lumen.

... An INDEPENDENT CLAIM is also included for an aperture closure  
device for vessel wall...

...For locating vessel lumen to enable placement of a vascular  
hole closure device.

...Simplifies the steps required to close the opening. Avoids widening  
of opening and effectively retains the closure device in the  
vessel. Enables to quickly and effectively close opening e.g.  
puncture in vessel wall...

...The figure shows the perspective view of the closure device showing  
the clip legs...

... Elongated member (12...

... Clip (14...

... Opening (24

Title Terms: LOCATE ;

International Patent Class (Main): A61M-005/00

36/3,K/25

DIALOG(R)File 350:Derwent WPIX

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015767292 \*\*Image available\*\*

WPI Acc No: 2003-829494/200377

Related WPI Acc No: 2003-521350

XRAM Acc No: C03-233601

XRPX Acc No: N03-662677

Vascular opening assembly, for closing an opening in a blood vessel, comprises a sheath adapted to be positioned so that the distal end is adjacent an opening, a mandrel disposed in lumen of sheath and a collapsible sealing member

Patent Assignee: DING N (DING-I)

Inventor: DING N

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030125766	A1	20030703	US 2000498542	A	20000204	200377 B
			US 2002314552	A	20021204	

Priority Applications (No Type Date): US 2000498542 A 20000204; US 2002314552 A 20021204

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030125766	A1	16	A61B-017/08	Cont of application US 2000498542 Cont of patent US 6547806

Vascular opening assembly, for closing an opening in a blood vessel, comprises a sheath adapted to be positioned so that the distal end is adjacent an...

Abstract (Basic):

... A vascular opening assembly (30) comprises a sheath (10) adapted to be positioned so that the distal end...

...disposed in the lumen of the sheath, and a collapsible sealing member (40) with a fluid impervious film carried by wires attached to mandrel and expanding radially outward.

... A vascular opening assembly (30) comprises a sheath (10) adapted to be positioned so that the distal end...

...disposed in the lumen of the sheath, and a collapsible sealing member (40) with a fluid impervious film carried by wires attached to mandrel and expanding radially outward. The mandrel is adapted to be positioned so that...

...An INDEPENDENT CLAIM is also included for a method for closing an opening in a blood vessel (60) of a patient comprising...

...1) providing a collapsible sealing member mounted on a mandrel with a fluid impermeable body in a naturally expanded configuration...

...4) positioning the sealing member on an inner wall of the blood vessel adjacent to the opening;  
(...)

...The invention is used for closing openings in blood vessels (claimed). It is used for closing punctures, incisions or other openings in the wall of a blood vessel...

...The figure is a schematic illustration of the vascular sealing device

LA TE



after the sealing member has been deployed...

... **Vascular opening** assembly (30

Technology Focus:

... **INSTRUMENTATION AND TESTING...**

...Preferred **Process** : The sealant is introduced by flowing it into the area adjacent to the opening or by using a **syringe** to **inject** it into the area adjacent to the **opening** . The **sealant** comprises a pro coagulant, thus promoting clotting and form a haemostatic seal, a thermally reversible material with a gelation temperature not higher than 37degreesC and a photo-initiated material. The **closing** of the **opening** further comprises allowing the **sealant** to warm to body temperature to promote hardening of the sealant, directing an activating light into the sealant to initiate polymerization and cross-**link** reactions and bringing a second material into contact with the sealant to cause an in situ cross- **linking** reaction in an area adjacent to the blood vessel...

...assembly further comprises an introducer (50) disposed around the sheath and a sealant to be **injected** with a **syringe** into an area adjacent to the opening. The wires comprise stainless steel, nitinol, elgiloy, polymeric

International Patent Class (Main): **A61B-017/08**

36/3,K/32

DIALOG(R)File 350:Derwent WPIX

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015534550 \*\*Image available\*\*

WPI Acc No: 2003-596700/200356

Related WPI Acc No: 2003-255423; 2004-641839

XRAM Acc No: C03-161607

XRPX Acc No: N03-475493

**Catheter and introducer needle assembly for infusing fluids ,  
comprises needle defining notch and notch distance between  
notch-proximal end and needle -distal end, and septum with length  
greater than notch distance**

Patent Assignee: JIN C K (JINC-I); MENG C W C (MENG-I); MINER T M (MINE-I);  
BECTON DICKINSON & CO (BECT )

Inventor: JIN C K; MENG C W C; MINER T M

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030069542	A1	20030410	US 2001865918	A	20010525	200356 B
			US 2002253682	A	20020924	
US 6719726	B2	20040413	US 2001865918	A	20010525	200425
			US 2002253682	A	20020924	

Priority Applications (No Type Date): US 2001865918 A 20010525; US  
2002253682 A 20020924

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030069542	A1	18	A61M-005/178	Div ex application US 2001865918 Div ex patent US 6506181
US 6719726	B2		A61M-005/178	Div ex application US 2001865918 Div ex patent US 6506181

**Catheter and introducer needle assembly for infusing fluids ,  
comprises needle defining notch and notch distance between  
notch-proximal end and needle -distal end, and septum with length  
greater than notch distance**

Abstract (Basic):

... A catheter and introducer **needle** assembly (10), comprises a catheter adapter (24) in **fluid** communication with catheter (21), an introducer **needle** (31) defining notch (33) adjacent to distal end and notch distance between proximal end of notch and distal end of the **needle** , a **needle** hub, and an elastomeric septum having a length greater than the notch distance.

... A catheter and introducer **needle** assembly, comprises a catheter, a catheter adapter in **fluid** communication with the catheter, an introducer **needle** , a **needle** hub and an elastomeric septum. The catheter adapter has a proximal end (PE) and a distal end (DE), **connected** to PE of the catheter, and includes side port (22) in **fluid** communication with the catheter adapter. The introducer **needle** has PE and DE disposed inside the catheter and defines a notch adjacent to DE and notch distance between PE of notch and DE of the **needle** . The **needle** hub has PE and DE **connected** to PE of the **needle** . The elastomeric septum defining a cavity is disposed in the catheter adapter and is located...

...For infusing **fluid** such as normal saline solution, various **medicaments** and total parenteral nutrition, withdrawing blood from a patient or monitoring various parameters of the patient's **vascular** system...

LATE  
DATE

... **Intravenous** catheter and introducer **needle** assembly effectively minimizes blood leakage from the assembly during the **insertion procedure** , even when a notched introducer **needle** is used, that **exerts** a reduced drag **force** on the introducer **needle** when it is being withdrawn from the catheter. The septum in the catheter assembly effectively **blocks** the flow of **fluid** even after the introducer **needle** is removed from the catheter...  
...The figure shows the view of an integrated catheter and introducer **needle** having the low drag septum...

...Introducer **needle** assembly (10...

...Introducer **needle** (31

...Title Terms: **NEEDLE** ;

International Patent Class (Main): **A61M-005/178**

International Patent Class (Additional): **A61M-005/00** ...

... **A61M-005/31** ...

... **A61M-005/32**

36/3,K/36

DIALOG(R)File 350:Derwent WPIX

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015380028 \*\*Image available\*\*

WPI Acc No: 2003-440969/200341

Related WPI Acc No: 2004-155808; 2004-155809; 2004-642152

XRPX Acc No: N03-352152

**Hemostasis promoting material delivering system for sealing puncture site of blood vessel , has introducer sheath inserted in blood vessel puncture to deliver hemostasis promoting material from syringe to puncture site via control tip**

Patent Assignee: SUB-Q INC (SUBQ-N)

Inventor ASHBY M

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030088269	A1	20030508	US 20017204	A	20011108	200341 B
WO 200339627	A2	20030515	WO 2002US36070	A	20021107	200342
AU 2002360367	A1	20030519	AU 2002360367	A	20021107	200464

Priority Applications (No Type Date): US 20017204 A 20011108

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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US 20030088269	A1	31	A61B-017/08	
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WO 200339627	A2 E		A61M-000/00	
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Designated States (National): AU CA JP

Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

AU 2002360367	A1		A61B-017/08	Based on patent WO 200339627
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**Hemostasis promoting material delivering system for sealing puncture site of blood vessel , has introducer sheath inserted in blood vessel puncture to deliver hemostasis promoting material from syringe to puncture site via control tip**

Abstract (Basic):

... An introducer sheath (10) is provided for **insertion** in a blood **vessel puncture** (108). A hydration chamber (12), which receives and hydrates a pledget of hemostasis promoting material (20), is **connected** to the proximal end of the introducer sheath and to a **syringe** (18). A control tip has a tube extending from the interior of the hydrate chamber...

... a) a blood **vessel puncture location determination system** for delivery of hemostasis promoting material; and...

...b) a blood **vessel puncture hemostasis promoting method** .

...Applicable for **sealing of puncture site of blood vessel through fluid - pressure** delivery of hemostasis promoting material e.g. absorbable sponge material...

...Enables delivery of hemostasis promoting material to **puncture site of blood vessel** without possibility of **injection** of hemostasis promoting material to interior of blood **vessel** other than blood **vessel puncture** site, to facilitate hemostasis of **puncture site**...

...The figure shows the side cross-sectional view of blood **vessel puncture** site with hemostasis promoting material delivered to blood **vessel puncture** site by **fluid pressure** .

ONE OF  
YOUR TWO  
BEST  
REF'S  
FOUND  
SO  
FAR

...

... Syringe (18...

...Blood vessel puncture (108

...Title Terms: **SYSTEM** ;

International Patent Class (Main): **A61B-017/08** ...

... **A61M-000/00**

36/3,K/37

DIALOG(R)File 350:Derwent WPIX

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015377224      \*\*Image available\*\*

WPI Acc No: 2003-438162/200341

XRAM Acc No: C03-115961

XRPX Acc No: N03-349492

Hypodermic syringe for injection or withdrawal of fluid ,  
comprises patch including absorbent material for absorbing blood and  
other bodily fluids , and adhesive for retaining patch on skin of  
patient after removal of needle

Patent Assignee: MARSHALL J M (MARS-I)

Inventor: MARSHALL J M

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6524284	B1	20030225	US 2000540173	A	20000331	200341 B

Priority Applications (No Type Date): US 2000540173 A 20000331

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6524284	B1	4	A61M-005/32	

Hypodermic syringe for injection or withdrawal of fluid ,  
comprises patch including absorbent material for absorbing blood and  
other bodily fluids , and adhesive for retaining patch on skin of  
patient after removal of needle

Abstract (Basic):

...      A **hypodermic syringe** comprises a **patch** for adherence to  
the skin about the area of insertion and carried releasably upon a  
**needle** prior to and during the insertion...

...The **patch** includes an absorbent material for absorbing blood and other  
bodily **fluids** , an adhesive for retaining the **patch** on the skin of  
patient after the **needle** is removed, and an **opening** through which  
the **needle** is inserted.

...      A **hypodermic syringe** comprises...

...a) a **needle** (14) for insertion into the skin of medical patient; and  
...

...b) a **patch** (16) for adherence to the skin about the area of insertion  
and carried releasably upon the **needle** prior to and during the  
insertion...

...The **patch** includes an absorbent material for absorbing blood and other  
bodily **fluids** , and an adhesive for retaining the **patch** on the skin  
of patient after the **needle** is removed. It also comprises an **opening**  
through which the **needle** is inserted...

...The **opening** extends through the absorbent material that coincides with  
the diameter of the **needle** .  
...

...An INDEPENDENT CLAIM is also included for a **method** for **inserting** a  
**needle** into the skin of a medical patient comprising...

...i) impaling a self- **sealing patch** upon the **needle** through an  
**opening** in the **patch** prior to insertion of the **needle** ;

(...

...ii) inserting the **needle** into the skin with the **patch** contacting and adhering to the skin; and...

...iii) withdrawing the **needle** from the skin with the **patch** remaining upon the skin so that the **opening** in the **patch** **closes** and **seals** the skin at the insertion point of the **needle** to prevent blood and other bodily **fluids** from seeping...

...For **injection** or withdrawal of **fluid** , e.g. blood...

...The invention minimizes the expulsion of patient's body **fluids** , e.g. blood when giving shots, drawing blood, or **intravenous** feeding...

...The drawing shows a perspective view of a **hypodermic syringe** in a fragmented form...

... **Needle** (14...

... **Patch** (16

Title Terms: **HYPODERMIC** ;

International Patent Class (Main): **A61M-005/32**

36/3,K/51

DIALOG(R)File 350:Derwent WPIX

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014374551 \*\*Image available\*\*

WPI Acc No: 2002-195254/200225

Related WPI Acc No: 2000-531966; 2002-138246; 2004-487239

XRAM Acc No: C02-060280

XRPX Acc No: N02-148335

**Endoluminal device delivery assembly for release of endoluminal  
therapeutic device for treatment within vasculature of patient,  
includes tubular distal tip formed of yieldable material**

Patent Assignee: MICRUS CORP (MICR-N); KURZ D R (KURZ-I)

Inventor: KURZ D R

Number of Countries: 095 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020016598	A1	20020207	US 98211835	A	19981215	200225	B
			US 2000625627	A	20000725		
			US 2001971388	A	20011003		
WO 200213705	A1	20020221	WO 2000US21928	A	20000810	200225	N
AU 200066318	A	20020225	AU 200066318	A	20000810	200245	N
			WO 2000US21928	A	20000810		
EP 1307145	A1	20030507	EP 2000953957	A	20000810	200332	N
			WO 2000US21928	A	20000810		
US 6679903	B2	20040120	US 98211835	A	19981215	200407	
			US 2000625627	A	20000725		
			US 2001971388	A	20011003		
JP 2004505714	W	20040226	WO 2000US21928	A	20000810	200416	N
			JP 2002518855	A	20000810		

Priority Applications (No Type Date): US 98211835 A 19981215; US 2000625627  
A 20000725; US 2001971388 A 20011003; WO 2000US21928 A 20000810; AU  
200066318 A 20000810; EP 2000953957 A 20000810; JP 2002518855 A 20000810

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020016598	A1		7	A61F-011/00	Cont of application US 98211835 Cont of application US 2000625627 Cont of patent US 6102932 Cont of patent US 6319267
WO 200213705	A1	E		A61B-017/12	
				Designated States (National):	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
				Designated States (Regional):	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
AU 200066318	A			A61B-017/12	Based on patent WO 200213705
EP 1307145	A1	E		A61B-017/12	Based on patent WO 200213705
				Designated States (Regional):	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 6679903	B2			A61M-029/00	Cont of application US 98211835 Cont of application US 2000625627 Cont of patent US 6102932 Cont of patent US 6319267
JP 2004505714	W		30	A61B-017/12	Based on patent WO 200213705

**Endoluminal device delivery assembly for release of endoluminal  
therapeutic device for treatment within vasculature of patient,  
includes tubular distal tip formed of yieldable material**



Abstract (Basic):

... An endoluminal device delivery assembly for release and deployment of an endoluminal therapeutic **device** at a desired **location** for treatment within the **vasculature** of a patient, comprises an elongated flexible tubular catheter (12) having a distal end (14...

...an inner lumen (22), and a distal end (24) with a surface defining a distal **opening** (26). The tubular distal tip is formed of a yieldable material for releasably holding the proximal end of the endoluminal device, within its inner lumen. A **pusher** (34) dislodges the proximal end of the endoluminal device from the inner lumen of the tubular distal tip, to expel the proximal end of the endoluminal device through the distal **opening** of the tubular distal tip. An INDEPENDENT CLAIM is also included for a method of delivering an endoluminal therapeutic device into the **vasculature** of a patient, comprising introducing a **pusher** into the proximal end of the elongated flexible catheter to dislodge the end of the...

...For release and deployment of an endoluminal therapeutic **device** at a desired **location** for treatment within the **vasculature** of a patient

...of therapeutic interventional devices, without presenting broken or jagged ends that can potentially injure the **vasculature**, and without releasing undesirable particles or materials into the bloodstream...

...Distal **opening** of tubular distal end (26...

...Enlarged proximal end of **syringe** (28...

... **Pusher** (34

Technology Focus:

... Preferred Component: A flexible coil (32) is mounted to the distal end of a **syringe**. The distal tip forms a **fluid seal** on the proximal end of the endoluminal device. The catheter supplies **pressurized fluid** within the elongated flexible tubular catheter. The endoluminal therapeutic device has a stem portion (30...

International Patent Class (Main): **A61B-017/12** ...

... **A61M-029/00**

International Patent Class (Additional): **A61B-017/00**

36/3,K/56

DIALOG(R) File 350:Derwent WPIX

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014205860 \*\*Image available\*\*

WPI Acc No: 2002-026557/200203

XRPX Acc No: N02-020487

**Absorbable sponge delivery chamber and cannula for hemostasis of blood vessels has a chamber for sponge hydration with locking coupling to syringe and connection via smaller tube to delivery cannula**

Patent Assignee: SUB-Q INC (SUBQ-N); ASHBY M (ASHB-I); LEE E (LEEE-I);

URQUIDI L R (URQU-I)

Inventor: ASHBY M; LEE E; URQUIDI L R

Number of Countries: 097 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200187407	A1	20011122	WO 2001US15198	A	20010510	200203 B
AU 200163050	A	20011126	AU 200163050	A	20010510	200222
EP 1280580	A1	20030205	EP 2001937299	A	20010510	200310
			WO 2001US15198	A	20010510	
US 6540735	B1	20030401	US 2000570857	A	20000512	200324
US 20030120258	A1	20030626	US 2000570857	A	20000512	200343
			US 2003366752	A	20030214	

Priority Applications (No Type Date): US 2000570857 A 20000512; US 2003366752 A 20030214

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200187407 A1 E 38 A61M-037/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200163050 A A61M-037/00 Based on patent WO 200187407

EP 1280580 A1 E A61M-037/00 Based on patent WO 200187407

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

US 6540735 B1 A61M-025/00

US 20030120258 A1 A61M-025/00 Cont of application US 2000570857  
Cont of patent US 6540735

... and cannula for hemostasis of blood vessels has a chamber for sponge hydration with locking coupling to syringe and connection via smaller tube to delivery cannula

Abstract (Basic):

... The sponge preferably absorbable is placed in a chamber (14) that has one end tapered, is connected to a cannula (50) of smaller diameter than the chamber and has a coupling flange on its other end. The cannula includes a pusher (52) for delivery of the sponge after removal of the chamber. The chamber has a...

...120) at the cannula end that either vents from chamber to cannula or atmosphere. A connector (16) locks over the chamber flange and has a syringe fitting

... a) The connector between syringe and chamber...

...c) The system including a valve that also cuts the sponge...

... **System** allows over the wire delivery of hydrated absorbable sponge directly to the blood **vessel puncture** site and ensures correct positioning of the sponge to fully **occlude** the **puncture**. The chamber allows delivery of more absorbable sponge through a smaller tract by hydrating and **compressing** the sponge. The body absorbs sponge after use...

...Perspective view of the front loader **system** for the sponge...

... **Syringe connector** (16...

... **Pusher** (52

...Title Terms: **COUPLE** ;

International Patent Class (Main): **A61M-025/00** ...

... **A61M-037/00**

36/3,K/61

DIALOG(R)File 350:Derwent WPIX

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013759181      \*\*Image available\*\*

WPI Acc No: 2001-243393/200125

Related WPI Acc No: 1999-104923

XRAM Acc No: C01-072950

XRPX Acc No: N01-173162

Sealing **apparatus** for sealing **percutaneous** punctures in blood vessel wall after catheterization procedure , includes tubular member having hub on proximal end and ejection port on distal end

Patent Assignee: TRICARDIA LLC (TRIC-N)

Inventor: HOLMES D; RYDELL M A; SCHWARTZ R S; VAN TASSEL R A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6193670	B1	20010227	US 97800047	A	19970214	200125 B
			US 98218482	A	19981222	

Priority Applications (No Type Date): US 98218482 A 19981222; US 97800047 A 19970214

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6193670	B1	15	A61B-005/00	CIP of application US 97800047 CIP of patent US 5855559

Sealing **apparatus** for sealing **percutaneous** punctures in blood vessel wall after catheterization procedure , includes tubular member having hub on proximal end and ejection port on distal end

Abstract (Basic):

... A sealing **apparatus** comprises a tubular member having a closed distal end, a proximal end, and a lumen. An ejection port at the distal end provides **fluid** passageway from the lumen to an exterior of the tubular member. A hub is affixed...

... A sealing **apparatus** comprises a tubular member (12) having a closed distal end (16), a proximal end (18...

...distal end extends out of the distal end of the tubular introducer sheath when fully **inserted** . A port (52, 54) is positioned proximate to the distal end of the tubular member. It provides **fluid** passageway from the tubular member lumen to an exterior of the tubular member. A hub...

...predetermined length formed on its surface. The groove (32) has two ends, and a first **fluid** passageway (40) extends between the lumen and the first end (36). A transparent cover member...

...seal membrane is positioned between the first passageway and the lumen. A predetermined volume of **fluid** is trapped in the **fluid** passageway and the **sealed** track. A hemostatic seal (30) is provided at the proximal end of the lumen...

...An INDEPENDENT CLAIM is also included for a **method** of **sealing** percutaneous **punctures** in the blood **vessel** of a patient...

...The inventive **apparatus** is used for **sealing** percutaneous **punctures** in a blood **vessel** wall after a catheterization **procedure** . It can be used in conjunction with a tubular introducer having a sheath whose distal end is **insertable** into a puncture wound...

...The inventive sealing **apparatus** effectively ensures that the hemostatic agent will not be **injected** into the blood vessel...

...The figure shows a cross-sectional view of the sealing **apparatus** .  
...

... **Fluid** passageway (40  
Technology Focus:

... **INSTRUMENTATION AND TESTING...**

...Preferred Components: The sealing **apparatus** further comprises a **compression** chamber formed at the second end of the groove. A dual **syringe** assembly is provided for **injecting** a hemostatic agent through the hemostatic seal into the lumen. The tubular member includes a...

...Preferred Agent: The hemostatic agent can also be vasoconstrictor **drugs** , such as phenylephrine, norepinephrine, epinephrine, prostaglandin F2 alpha, endothelin, methergine, oxytocin, or isoprel.

...Title Terms: **APPARATUS** ;

International Patent Class (Main): **A61B-005/00**

36/3,K/74

DIALOG(R)File 350:Derwent WPIX

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013259297

WPI Acc No: 2000-431180/200037

XRAM Acc No: C00-130986

XRPX Acc No: N00-321813

**Vascular access device comprising a vascular access needle , an access lumen, at least one infusion lumen an infusion device .**

Patent Assignee: UNIV VIRGINIA PATENT FOUND (UYVI-N)

Inventor: KALLMES D F

Number of Countries: 089 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200033744	A1	20000615	WO 99US29029	A	19991208	200037 B
AU 200020452	A	20000626	AU 200020452	A	19991208	200045

Priority Applications (No Type Date): US 99143251 P 19990709; US 98111438 P 19981208; US 99121371 P 19990225; US 99129959 P 19990419

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200033744 A1 E 57 A61B-017/08

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200020452 A A61B-017/08 Based on patent WO 200033744

**Vascular access device comprising a vascular access needle , an access lumen, at least one infusion lumen an infusion device .**

Abstract (Basic):

... Vascular access **device** comprises a vascular access **needle** having proximal and distal ends, an access lumen within the **needle** extending from the proximal to distal end, at least one infusion lumen having a longitudinal...

...distal end opening proximal to the distal end of the access lumen and an infusion **device** selectively **attached** to the proximal end of the lumen.

... Vascular access **device** comprises a vascular access **needle** having a proximal and a distal end, an access lumen within the **needle** extending from the proximal to the distal end, at least one infusion lumen having a...

...distal end opening proximal to the distal end of the access lumen and an infusion **device** selectively **attachable** to the proximal end of the infusion lumen. The infusion **device** is capable of infusing hemostatic material through the infusion lumen to produce hemostasis at a **punctured blood vessel** .

...

...1) a **method** of achieving hemostasis during a vascular access **procedure** ;  
(...

...2) a **method** of achieving hemostasis as part of a transcutaneous intravascular **procedure** ;  
(...

...4) a **method** for assisting the **closure** of a blood **vessel** **puncture** site...

...The **device** is useful for achieving hemostasis during a vascular access **procedure**.

Technology Focus:

... Preferred **Device** : The **device** further comprises a second infusion lumen having a longitudinal axis and proximal and distal ends  
...

...end opening proximal to the distal end of the access lumen and a second infusion **device** selectively **attachable** to the proximal end of the infusion lumen and also capable of infusing hemostatic material through the infusion lumen to produce hemostasis at a **punctured** blood **vessel**. The distal end of the second infusion lumen opens adjacent to the distal end of...

...lumen which is within the second infusion lumen. The first and second infusion lumens are **located** adjacent to one another or are in a coaxial configuration. The access lumen is **located** coaxially within the infusion lumen. The **device** comprises a mixing chamber near its distal end, the infusion lumens terminating in the chamber...

...proximal to the distal opening of the access lumen and the infusion lumens. The infusion **device** is a **syringe** with manual or mechanical control means for delivery and mixing of a multi-component material. The vascular hemostatic **device** preferably comprises a hemostatic plug with a longitudinal axis, a removable deployment sheath with a...

...taper and a channel within the deployment sheath through which a means of guiding the **device** can pass and along which the plug can be directed to a position adjacent to...

...The deployment sheath is retractable or is adapted to being peeled away after the access **device** is used to position the plug. The hemostatic **device** comprises a **needle** passing through the longitudinal axis of both the deployment sheath and the plug. The **device** has a channel with a proximal and distal end through which extravascular blood emanating from the **vessel** **puncture** can flow to the proximal end when the **device** is adjacent to the **vessel** **puncture** site. The **plug** has a removal filament **attached** to it for use in extraction of a mal-deployed plug. The deployment sheath has an access port whereby the plug can be wetted by **injection** of a **liquid** radio-opaque contrast medium which renders the plug radio-opaque...

...Preferred Composition: The infusion **device** is provided with at least one hemostatic composition selected from fibrin glue/thrombin, calcium alginate...

...comprises a cationic salt, at least one of guluronic acid and mannuronic acid and a **liquid** medium capable of providing the composition with the physical characteristics of a solid, **liquid**, gel or foam. The composition comprises guluronic acid (0.5-5%) and/or mannuronic acid...

...at least about 1% by weight), mannuronic acid (at least about 1% by weight) and **water** (less than about 98%). The composition has a viscosity of about 150-300 milliPascals. The...

Extension Abstract:

... constructed by welding of metallic sheaths to the outer portion

of single-wall arterial entry **needles** with a beveled tip 8 and no inner stylet. The sheaths were cut to a length such that when the **needle** was **placed** through the diaphragm of the sheath, the end of the sheath rested approximately 5 mm from the **needle** tip. The arterial sheath had a side-port **attached** to its proximal portion that allowed **injection** of **liquids** and slurries and a diaphragm that allowed a **water** -tight seal around a **needle** **placed** through the diaphragm lumen. A smooth, tapered transition from the outer surface of the **needle** to the outer surface of the sheath was achieved by **placing** a plastic shrink-wrap tube over the **needle** -sheath transition and heating the wrap to conform to the **needle** -sheath transition. Small holes approximately 1 mm diameter were cut in the shrink-wrap plastic...

...Title Terms: **DEVICE** ;

International Patent Class (Main): **A61B-017/08**



36/3,K/77

DIALOG(R)File 350:Derwent WPIX

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013110793

WPI Acc No: 2000-282664/200024

Related WPI Acc No: 1998-426833; 1998-446881; 1999-526927; 2000-182871;  
2000-399000; 2003-119096; 2003-636469; 2004-642161

XRAM Acc No: C00-085229

**Biological sealant , for percutaneous occlusion of puncture sites  
and tracts, comprises a gelatin slurry which includes milled gelatin  
powder and thrombin in saline**

Patent Assignee: BIOINTERVENTIONAL CORP (BIOI-N)

Inventor: EPSTEIN G H; LEMPERT T E; MARTIN B B

Number of Countries: 023 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6045570	A	20000404	US 97798860	A	19970211	200024 B
			US 97972383	A	19971118	
			US 98126963	A	19980731	
			US 98161193	A	19980925	
WO 200018301	A1	20000406	WO 99US21744	A	19990921	200025
EP 1115336	A1	20010718	EP 99949752	A	19990921	200142
			WO 99US21744	A	19990921	

Priority Applications (No Type Date): US 98161193 A 19980925; US 97798860 A  
19970211; US 97972383 A 19971118; US 98126963 A 19980731

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6045570	A		39	A61K-017/08	CIP of application US 97798860 CIP of application US 97972383 CIP of application US 98126963 CIP of patent US 5782860 CIP of patent, US 5922009

WO 200018301 A1 E A61B-017/00

Designated States (National): CA IL JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU,  
MC NL PT SE

EP 1115336 A1 E A61B-017/00 Based on patent WO 200018301

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE

**Biological sealant , for percutaneous occlusion of puncture sites  
and tracts, comprises a gelatin slurry which includes milled gelatin  
powder and thrombin in...**

Abstract (Basic):

... A biological **sealant** (I) comprising a gelatin slurry, which  
includes milled gelatin powder, is new.

... 1) a **process** for making (I), comprising weighing an amount of  
milled gelatin powder, mixing the powder with...

...2) a biological **sealant system** comprising milled gelatin powder and  
a means for mixing to form a slurry...

...3) a **method** for percutaneously forming a **closure** of a **puncture** in  
a wall of a blood **vessel** , comprising temporarily **closing** the  
**puncture** with an expandable **closure device** introduced through the  
**puncture** , introducing the **sealant** into the wall of the blood **vessel**  
, and allowing hemostasis followed by removal of the contracted  
**closure device** ;

(...

...4) a biological **sealant system** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** , comprising an expandable **closure device** , gelatin powder, thrombin powder and saline...

...5) a biological **sealant system** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** comprising a **closure device** having at least one suture adapted to **occlude** the **puncture** and extend to outside the body, gelatin powder, thrombin powder and saline...

...6) a **method** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** , by using a **closure device** with a suture adapted to extend from the **puncture** to outside the body, and a biological **sealant** comprising a gelatin slurry, comprising **closing** the **puncture** with the suture, and introducing the **sealant** into the body proximal to the wall of the blood **vessel** ;

(...

...7) a biological **sealant system** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** comprising a **closure device** having an inflatable member, a deployment means for introducing the inflatable member through the **puncture** and inflating it, gelatin powder, thrombin powder and saline...

...8) a **method** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** , by using a **closure device** with an inflatable member, and a biological **sealant** comprising introducing the inflatable member through the **puncture** , inflating it against the wall of the **vessel** , introducing the **sealant** into the body proximal to the wall of the **vessel** , allowing hemostasis, and removing the inflatable member...

...9) a biological **sealant system** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** , comprising a **closure device** with an anchor which can be introduced through the **puncture** , a suture **secured** to the anchor, a hemostatic **plug** engaging the suture so the anchor can be pulled proximally and the **plug** distally to **occlude** the **puncture** , gelatin powder, thrombin powder and saline ...

...10) a **method** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** by using a **closure device** using an anchor, a suture, a hemostatic **plug** and a biological **sealant** , comprising **closing** the **puncture** with the **plug** and anchor, introducing the **sealant** into the body proximal to the wall of the **vessel** , and allowing hemostasis...

...11) a biological **sealant system** for percutaneously forming a **closure** of a **puncture** in a wall of a blood **vessel** , comprising a **closure device** with an **insertion** sheath which can be passed distally through a tissue tract until it is adjacent to the **puncture** outside the wall of the **vessel** , a mass of hemostatic material which can be deposited adjacent to the **puncture** outside the **vessel** , gelatin powder, thrombin powder and saline...

...12) a **method** for percutaneously forming a **closure** of a **puncture** in

a wall of a blood **vessel** by using a **closure device** with an **insertion** sheath containing hemostatic material, and a **sealant** comprising introducing the sheath adjacent to the **puncture** outside the **vessel** , depositing the **sealant** outside the wall of the **vessel** to **seal** the **puncture** and depositing the hemostatic material adjacent to the **sealant** ;

(...

...13) a **method** for forming a **closure** of a **puncture** in a wall of a blood **vessel** , using a gelatin slurry, comprising introducing the slurry into the body proximal to the wall of the blood **vessel** , and allowing the slurry to assist hemostasis; and...

...14) a **method** for forming a **closure** of an **opening** in a wall of an organ in the body, by using a gelatin slurry, comprising...

...The **sealant** is useful for percutaneous access and **occlusion** of **vascular** access sites and other **puncture** sites and natural tracts in humans (claimed

Technology Focus:

... Preferred Composition: (I) preferably includes Gelfoam (RTM) powder mixed with saline or **water** . The slurry contains 0.5-10% gelatin and may include 10-20000u/ml of thrombin...

...Preferred **method** : The **method** of (3) further comprises adding thrombin to the **sealant** before introduction to the body. The gelatin slurry in is introduced using a **syringe** , and optionally an **injection** catheter with a slit in it. The **method** of (13) further comprises **occluding** the **puncture** in the **vessel** wall prior to the slurry introduction.

...Title Terms: **SEAL** ;

International Patent Class (Main): **A61B-017/00** ...

36/3,K/78

DIALOG(R) File 350:Derwent WPIX

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013065867 \*\*Image available\*\*

WPI Acc No: 2000-237739/200020

Related WPI Acc No: 1994-037124; 1994-058400; 1994-279414; 1995-006278;

1995-006284; 1995-006285; 1995-098529; 1995-200153; 1995-240431;  
1995-254879; 1995-263687; 1995-344425; 1995-357865; 1996-019735;  
1996-068670; 1996-068671; 1996-096969; 1996-238605; 1996-362423;  
1996-424512; 1997-164984; 1997-164985; 1997-393311; 1997-434801;  
1997-434802; 1997-434803; 1997-434804; 1997-558641; 1997-558642;  
1997-558643; 1997-558644; 1997-558645; 1998-018166; 1998-018167;  
1998-018168; 1998-018169; 1998-018252; 1998-120291; 1998-158711;  
1998-168283; 1998-216998; 1998-506432; 1998-506433; 1998-506445;  
1998-520783; 1998-567504; 1999-044369; 1999-131796; 1999-131798;  
1999-444300; 1999-518497; 1999-518712; 1999-527406; 1999-527407;  
1999-579814; 1999-600987; 2000-013328; 2000-204831; 2001-060948;  
2001-060949; 2001-060950; 2001-060951; 2001-060952; 2001-060953;  
2001-060954; 2001-060956; 2001-112019; 2001-137545; 2001-159609;  
2001-201561; 2001-326969; 2001-328305; 2001-432031; 2002-041021;  
2002-082278; 2002-088763; 2002-121424; 2002-179338; 2002-214905;  
2002-682392; 2002-696720; 2003-103019; 2003-341784; 2003-615770;  
2003-765678; 2003-776578; 2003-787028; 2004-409950; 2004-625141

XRAM Acc No: C00-072400

XRPX Acc No: N00-178285

**Barrier material, to close vascular puncture sites to prevent bleeding after surgery or trauma, comprises matrix of protein and polymer**

Patent Assignee: NEOMEND INC (NEOM-N); ADVANCED CLOSURE SYSTEMS INC

(ADCL-N); CRUISE G M (CRUI-I); HNOJEWYJ O (HNOJ-I); EDWARDS S D (EDWA-I);  
GOUGH E (GOUG-I)

Inventor: CRUISE G M; HNOJEWYJ O; EDWARDS S D; GOUGH E

Number of Countries: 085 Number of Patents: 013

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200012018	A1	20000309	WO 99US19561	A	19990825	200020	B
AU 9955870	A	20000321	AU 9955870	A	19990825	200031	
EP 1107813	A1	20010620	EP 99942511	A	19990825	200135	
			WO 99US19561	A	19990825		
US 20010018598	A1	20010830	US 98188083	A	19981106	200151	
US 20010031948	A1	20011018	US 98187384	A	19981106	200166	
			US 2001796238	A	20010228		
US 20020032463	A1	20020314	US 98188083	A	19981106	200222	
			US 99283535	A	19990401		
US 6371975	B2	20020416	US 98188083	A	19981106	200232	
JP 2002525137	W	20020813	WO 99US19561	A	19990825	200267	
			JP 2000571017	A	19990825		
US 6458147	B1	20021001	US 98188033	A	19981106	200268	
			US 99283535	A	19990401		
US 20020161399	A1	20021031	US 98188083	A	19981106	200274	
			US 200256895	A	20020125		
US 6475182	B1	20021105	US 9736299	P	19970312	200276	
			US 97963408	A	19971103		
			US 9821708	A	19980210		
			US 9837659	A	19980310		
			US 98140017	A	19980826		
AU 759991	B	20030501	AU 9955870	A	19990825	200339	
CA 2435050	A1	20000309	CA 2340648	A	19990825	200374	
			CA 2435050	A	19990825		

Priority Applications (No Type Date): US 99283535 A 19990401; US 98140017 A

19980826; US 98187384 A 19981106; US 98188083 A 19981106; US 2001796238 A  
 20010228; US 98188033 A 19981106; US 200256895 A 20020125; US 9736299 P  
 19970312; US 97963408 A 19971103; US 9821708 A 19980210; US 9837659 A  
 19980310

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200012018	A1	E	118	A61B-017/36	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9955870	A				Based on patent WO 200012018
EP 1107813	A1	E		A61M-037/00	Based on patent WO 200012018
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 20010018598	A1			A61D-001/00	
US 20010031948	A1			A61M-005/178	Cont of application US 98187384
US 20020032463	A1			A61D-001/00	CIP of application US 98188083
US 6371975	B2			A61B-017/08	
JP 2002525137	W		118	A61L-031/00	Based on patent WO 200012018
US 6458147	B1			A61B-017/04	CIP of application US 98188033
US 20020161399	A1			A61D-001/00	Div ex application US 98188083
US 6475182	B1			A61M-037/00	Div ex patent US 6371975
					Provisional application US 9736299
					CIP of application US 97963408
					CIP of application US 9821708
					CIP of application US 9837659
					CIP of patent US 6033401
					CIP of patent US 6302898
AU 759991	B			A61B-017/36	Previous Publ. patent AU 9955870
					Based on patent WO 200012018
CA 2435050	A1	E		A61L-024/04	Div ex application CA 2340648
<b>Barrier material, to close vascular puncture sites to prevent bleeding after surgery or trauma, comprises matrix of protein and polymer</b>					

Abstract (Basic):

... Barrier material for applying to a **vascular puncture** site is biocompatible and biodegradable, and comprises a compound chemically crosslinked without the use of an enzyme to form a non- **liquid** mechanical matrix.

... i) a biocompatible and biodegradable material applied to arrest the flow of blood or **fluid** from body tissue, or to arrest diffuse bleeding comprising a hydrogel compound free of a...

...ii) a **system** for applying the non- **liquid** matrix comprising a delivery **device** consisting of a **fluid** delivery channel to be contacted with the tissue region, a first dispenser containing the protein solution, a second dispenser containing the polymer solution, and an introducer **linked** to and supporting the dispensers, which allows the solutions to flow to the delivery channel...

...For preventing blood or **fluid** flow...

...Used for **sealing vascular puncture** sites after, e.g., coronary or other surgery, or to stop bleeding following trauma...

Technology Focus:

... Preferred Barrier Material: The compound includes a protein, including recombinant or natural **serum** albumin. The material comprises a first **liquid** component (protein) and a second **liquid**

component (polymer) chemically crosslinked, without the use of an enzyme, to form a non- **liquid** mechanical matrix. The protein is human **serum** albumin at concentration at most 25...

...Preferred Application **System** : The introducer includes an actuator to mechanically **link** the dispensers to convey the solutions simultaneously to the **fluid** delivery channel for mixing. The **system** may include a cannula, sprayer, catheter tube or **syringes** .  
...

...polymer, especially a multi-armed polyethylene glycol (PEG). The material comprises a chemically crosslinked first **liquid** component (protein) and a second **liquid** component (polymer). The polymer is a derivative of a hydrophilic polymer with a functionality of

Extension Abstract:

... prepared by mixing a solution of 4-PEG-tetra-succinimidyl glutarate (0.4 g) in **water** (2 ml) and a solution of 25% **serum** albumin (2 ml). A network formed in 90 seconds. The gelation time could be controlled...

...To **close** a femoral **puncture** site in sheep, the solutions were mixed and passed into a catheter in the puncture...

...the catheter were used to position nozzles in the catheter in the artery wall. After **injecting** the solutions, allowing 20 seconds for gelation and applying direct **pressure** for 3 minutes, complete sealing was observed after 3.5 minutes.

International Patent Class (Main): **A61B-017/04** ...

... **A61B-017/08** ...

... **A61B-017/36** ...

... **A61M-005/178** ...

... **A61M-037/00**

International Patent Class (Additional): **A61B-017/00** ...

36/3,K/80

DIALOG(R)File 350:Derwent WPIX

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013033689 \*\*Image available\*\*

WPI Acc No: 2000-205540/200018

Related WPI Acc No: 2002-062644

XRAM Acc No: C00-063343

XRPX Acc No: N00-152966

Closure , e.g. of access opening in femoral artery , by insertion  
of semipermeable barrier and hemostatic flowable material which swells on  
contact with blood passing through barrier

Patent Assignee: FUSION MEDICAL TECHNOLOGIES INC (FUSI-N); REDMOND R J  
(REDM-I); REICH C J (REIC-I); VEGA F (VEGA-I); VIDAL C A (VIDA-I); BAXTER  
HEALTHCARE SA (BAXT ); BAXTER INT INC (BAXT )

Inventor: REDMOND R J; REICH C J; VEGA F; VIDAL C A; COLLINSON M; RONDINONE  
J F; VIDAL C

Number of Countries: 087 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200007505	A1	20000217	WO 99US17361	A	19990730	200018 B
AU 9952477	A	20000228	AU 9952477	A	19990730	200030
EP 1109498	A1	20010627	EP 99937696	A	19990730	200137
			WO 99US17361	A	19990730	
US 6334865	B1	20020101	US 9895306	P	19980804	200207
			US 99361663	A	19990727	
US 20020026215	A1	20020228	US 9895306	P	19980804	200220
			US 99361663	A	19990727	
			US 2001957176	A	20010919	
JP 2003521270	W	20030715	WO 99US17361	A	19990730	200347
			JP 2000563193	A	19990730	
US 6613070	B2	20030902	US 9895306	P	19980804	200359
			US 99361663	A	19990727	
			US 2000212181	P	20000616	
			US 2001882296	A	20010614	
US 6699262	B2	20040302	US 9895306	P	19980804	200417
			US 99361663	A	19990727	
			US 2001957176	A	20010919	
US 20040162578	A1	20040819	US 9895306	P	19980804	200455
			US 99361663	A	19990727	
			US 2001957176	A	20010919	
			US 2004776479	A	20040210	

Priority Applications (No Type Date): US 99361663 A 19990727; US 9895306 P  
19980804; US 2001957176 A 20010919; US 2000212181 P 20000616; US  
2001882296 A 20010614; US 2004776479 A 20040210

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200007505 A1 E 34 A61B-017/04

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK  
SL TJ TM TR TT UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9952477 A Based on patent WO 200007505

EP 1109498 A1 E A61B-017/04 Based on patent WO 200007505

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE

US 6334865 B1 A61B-017/08 Provisional application US 9895306

US 20020026215 A1 A61B-017/08 Provisional application US 9895306

JP 2003521270 W	42	A61B-017/00	Div ex application US 99361663
US 6613070 B2		A61B-017/08	Based on patent WO 200007505
			Provisional application US 9895306
			CIP of application US 99361663
			Provisional application US 2000212181
			CIP of patent US 6334865
US 6699262 B2		A61B-017/04	Provisional application US 9895306
			Div ex application US 99361663
			Div ex patent US 6334865
US 20040162578 A1		A61B-017/08	Provisional application US 9895306

Div ex application US 99361663  
Div ex application US 2001957176  
Div ex patent US 6334865  
Div ex patent US 6699262

Closure , e.g. of access opening in femoral artery , by insertion of semipermeable barrier and hemostatic flowable material which swells on contact with blood passing through...

#### Abstract (Basic):

... a semipermeable barrier at the distal end of a tissue track adjacent to a blood **vessel** access **opening** which permits **passage** of at least one blood component but prevents passage of a chosen hemostatic material...

...2) closing a percutaneous tissue track leading to a blood **vessel** access **opening** comprising...

...ii) **inserting** the barrier in 2(i) into the blood vessel in a laterally retracted, undeployed configuration...

...iii) **placing** the barrier in 2(ii) in a laterally expanded, deployed configuration, against the access opening...

...v) maintaining the barrier in **place** for a suitable period of time to enable the hemostatic material to **seal** the **opening** ; and...

...vi) **placing** the barrier in the retracted, undeployed configuration and removing it from the blood **vessel** so that the **opening** is **sealed** .

...The **method** is used to seal a percutaneous tissue track which may have been formed by various therapeutic or diagnostic **procedures** which involves accessing a vein or artery. These **procedures** include angiograms, angioplasties, catheterization and peripheral artery angioplasty...

...The **method** prevents bleeding from the access opening without the necessity of applying direct **pressure** which can be time consuming and can cause ischemia. No foreign object is left in the blood vessel. The **method** obviates the use of a very small balloon catheter which can be expensive...

...The figure shows a closure assembly with the barrier **inserted** and the hemostatic material being introduced...

...hemostatic material introduction **syringe** (6...

...alignment **thread** (8  
Technology Focus:



... Preferred **Method** : The barrier is introduced by a carrier which preferably includes an actuator to move the...  
...aperture through the solidified hemostatic material may be easily filled with additional hemostatic material. A **thread** may be used as an alignment **device** for properly positioning the barrier introduction assembly and hemostatic material introduction **syringe** relative to one another...  
...Title Terms: **INSERT** ;  
International Patent Class (Main): **A61B-017/00** ...  
... **A61B-017/04** ...  
... **A61B-017/08**  
International Patent Class (Additional): **A61B-017/12**

36/3,K/84

DIALOG(R)File 350:Derwent WPIX

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012851632 \*\*Image available\*\*

WPI Acc No: 2000-023464/200002

Related WPI Acc No: 2000-013519; 2000-524468; 2000-549507; 2001-112261;  
2001-234953; 2002-138581

XRPX Acc No: N00-017438

**Hemostasis facilitating device for puncture of blood vessel wall in coronary angioplasty**

Patent Assignee: SUB-Q INC (SUBQ-N)

Inventor: ASHBY M; BRENNEMAN R; CRAGG A H

Number of Countries: 087 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9956692	A1	19991111	WO 99US8904	A	19990423	200002 B
AU 9939658	A	19991123	AU 9939658	A	19990423	200016
US 6162192	A	20001219	US 9871284	A	19980501	200102
EP 1083855	A1	20010321	EP 99922724	A	19990423	200117
			WO 99US8904	A	19990423	
JP 2002513639	W	20020514	WO 99US8904	A	19990423	200236
			JP 2000546724	A	19990423	
AU 748773	B	20020613	AU 9939658	A	19990423	200251
AU 200238250	A	20020711	AU 9939658	A	19990423	200257 N
			AU 200238250	A	20020507	

Priority Applications (No Type Date): US 9871284 A 19980501; AU 200238250 A 20020507

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9956692 A1 E 31 A61F-013/20

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK  
SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9939658 A Based on patent WO 9956692

US 6162192 A A61F-013/20

EP 1083855 A1 E A61F-013/20 Based on patent WO 9956692

Designated States (Regional): BE CH DE DK ES FI FR GB GR IT LI NL PT SE

JP 2002513639 W 34 A61F-013/00 Based on patent WO 9956692

AU 748773 B A61B-017/03 Previous Publ. patent AU 9939658

Based on patent WO 9956692

AU 200238250 A A61B-017/03 Div ex application AU 9939658

Div ex patent AU 748773

**Hemostasis facilitating device for puncture of blood vessel wall in coronary angioplasty**

Abstract (Basic):

... An introducer (12) has a large diameter staging chamber and a delivery chamber which are **connected** by tapered section. An absorbable sponge (40) is introduced in the staging chamber which is **pushed** and **compressed** in the delivery chamber by a **syringe**. A **plunger** (14) is **inserted** in the introducer and the sponge is **pushed** to **seal** the **puncture** in a blood vessel wall.

... staging chamber is less than the delivery chamber provided with a rounded outer surface for **inserting** into the skin tissue, and stopping at the puncture. A through hole is formed to the **plunger** for

passing a guide wire (26) and **locating** the sponge outside the puncture. A fitting (42) is provided to rear end of the introducer **connecting** the **syringe** which hydrates, **pushes** and **compresses** the sponge. The tapered section is provided for **compressing**, expanding or changing shape of the sponge. A depth indicator (52) is provided outside the introducer for **locating** the vessel wall depth. An INDEPENDENT CLAIM is also included for the **method** for facilitating hemostasis of **puncture** in the blood **vessel** wall...

...For **puncture** of blood **vessel** wall of **vein** or artery in coronary angioplasty, angiography, atherectomy, stenting of arteries...

...Enables hemostasis without applying external **pressure** on skin. Facilitates **locating** of blood vessel wall by depth indicator of introducer. Enables stopping bleeding while guide wire is installed in vein, as it is surrounded by **compressed** sponge...

...The figure shows the side cross sectional view of **punctured** blood **vessel** with the pledget...

... **Plunger** (14

...Title Terms: **DEVICE** ;

International Patent Class (Main): **A61B-017/03** ...

36/3,K/91

DIALOG(R)File 350:Derwent WPIX

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012531072      \*\*Image available\*\*

WPI Acc No: 1999-337178/199928

XRAM Acc No: C99-099037

XRPX Acc No: N99-252722

**Seal and method of use for sealing holes in blood vessels in surgical operations.**

Patent Assignee: SURFACE GENESIS INC (SURF-N)

Inventor: IMRAN M A

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5906631	A	19990525	US 97985952	A	19971205	199928 B

Priority Applications (No Type Date): US 97985952 A 19971205

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5906631	A	5	A61B-017/08	

**Seal and method of use for sealing holes in blood vessels in surgical operations.**

Abstract (Basic):

...            coated with a hydrophilic coating of acrylamide gel which may include a clot promoter to **seal** the **hole** .

...            An INDEPENDENT CLAIM is included for a **method** of **sealing** a **punctured** wound...

...Used in surgical operations to **seal** **holes** in blood **vessels** after **intravenous** **procedures** .

...

...Greatly shortens the time needed to **seal** **holes** . Counters the effect of heparin anti clotting agent...

...sealing **tool** (26

...Title Terms: **METHOD** ;

International Patent Class (Main): **A61B-017/08**

36/3,K/96

DIALOG(R)File 350:Derwent WPIX

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011871093 \*\*Image available\*\*

WPI Acc No: 1998-288003/199826

XRAM Acc No: C98-089295

XRPX Acc No: N98-226434

**Self-sealing injection closure patch for insertion of hypodermic needle or cannula - is adhered to site of penetration, contains pressure chamber and medicament within walls of differing resilience, and remains in place after withdrawal to suppress blood release**

Patent Assignee: CAP INC (CAPC-N); BANGERT C (BANG-I); HARREN E (HARR-I);  
KEP CO (KEPK-N)

Inventor: BANGERT C; HARREN E

Number of Countries: 080 Number of Patents: 017

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 19726386	A1	19980520	DE 197026386	A	19970621	199826	B
WO 9822027	A1	19980528	WO 97DE2684	A	19971117	199827	
AU 9853081	A	19980610	AU 9853081	A	19971117	199843	
EP 955901	A1	19991117	EP 97949934	A	19971117	199953	
			WO 97DE2684	A	19971117		
DE 19781295	T	19991216	DE 197081295	A	19971117	200005	
			WO 97DE2684	A	19971117		
CN 1237886	A	19991208	CN 97199742	A	19971117	200016	
US 6036721	A	20000314	WO 97DE2684	A	19971117	200020	
			US 99313337	A	19990517		
BR 9713360	A	20000125	BR 9713360	A	19971117	200022	
			WO 97DE2684	A	19971117		
AU 719167	B	20000504	AU 9853081	A	19971117	200030	
JP 2001502956	W	20010306	WO 97DE2684	A	19971117	200116	
			JP 98523072	A	19971117		
MX 9904379	A1	20000501	MX 994379	A	19990512	200129	
JP 3318715	B2	20020826	WO 97DE2684	A	19971117	200263	
			JP 98523072	A	19971117		
EP 955901	B1	20030423	EP 97949934	A	19971117	200329	
			WO 97DE2684	A	19971117		
DE 59709930	G	20030528	DE 97509930	A	19971117	200336	
			EP 97949934	A	19971117		
			WO 97DE2684	A	19971117		
RU 2207814	C2	20030710	WO 97DE2684	A	19971117	200355	
			RU 99111092	A	19971117		
ES 2191867	T3	20030916	EP 97949934	A	19971117	200368	
MX 216158	B	20030728	WO 97DE2684	A	19971117	200465	
			MX 994379	A	19990512		

Priority Applications (No Type Date): DE 196047496 A 19961116

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 19726386	A1	14	A61B-017/12	
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WO 9822027	A1 G		A61B-017/00	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU  
CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT  
KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9853081	A		A61B-017/00	Based on patent WO 9822027
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EP 955901	A1 G		A61B-017/00	Based on patent WO 9822027
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Designated States (Regional): AT BE CH DE ES FR GB IT LI NL

DE 19781295	T		A61B-017/132	Based on patent WO 9822027
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CN 1237886	A	A61B-017/00	
US 6036721	A	A61B-017/04	Cont of application WO 97DE2684
BR 9713360	A	A61B-017/00	Based on patent WO 9822027
AU 719167	B	A61B-017/00	Previous Publ. patent AU 9853081
			Based on patent WO 9822027
JP 2001502956	W	22 A61B-017/12	Based on patent WO 9822027
MX 9904379	A1	A61B-017/00	
JP 3318715	B2	7 A61B-017/12	Previous Publ. patent JP 200102956
			Based on patent WO 9822027
EP 955901	B1 G	A61B-017/00	Based on patent WO 9822027
	Designated States (Regional):	AT BE CH DE ES FR GB IT LI NL	
DE 59709930	G	A61B-017/00	Based on patent EP 955901
			Based on patent WO 9822027
RU 2207814	C2	A61B-017/00	Based on patent WO 9822027
ES 2191867	T3	A61B-017/00	Based on patent EP 955901
MX 216158	B	A61B-017/00	Based on patent WO 9822027

**Self-sealing injection closure patch for insertion of hypodermic needle or cannula...**

...is adhered to site of penetration, contains pressure chamber and medicament within walls of differing resilience, and remains in place after withdrawal to suppress blood release

...Abstract (Basic): Self-sealing injection closure for a punctured blood vessel is claimed. It has a pressurised chamber (604), with an elastic wall (602) facing the point of injection. A much less expansible wall (606) faces away from the point of injection. This is a holding wall which retains the needle used in treatment. In the original construction, the holding wall has a region to be punctured by the needle. In this location, this wall (606) has a thick layer of resilient material, which is 1-9 mm...

...wall, there is preferably a covering layer (611) especially of polyester or polyetherurethane covering the injection zone. Preferably the holding wall is a 35-90  $\mu$ m (preferably 40  $\mu$ m) thick polyetherurethane-, polyether- or polypropylene film and/or the pressure wall is made of the same, 10-35  $\mu$ m preferably 25  $\mu$ m thick sheet material. The resilient material preferably comprises natural or artificial rubber, latex, silicone rubber, a liquid silicone, hydrogel, polymeric plastic or a combination. The insertion region is transparent. Preferably a silicone- or synthetic rubber adhesive is used to unite the...

...USE - An injection closure patch, used when inserting hypodermic needles or cannulae into blood vessels for treatment purposes...

...ADVANTAGE - This injection closure positively prevents solid material from being separated or stamped-out from the holding wall. This prevents the former danger of its reaching the blood circulation. The pressure chamber is sealed pressure-tight, in a hygienic manner, following withdrawal. It protects personnel from potentially hazardous contact with blood. Arterial pressure fills the chamber, setting up an equilibrium, preventing bleeding. Medicament is included in the device, for precise local application. The breathing layer, prevents perspiration from accumulating, and spoiling the adhesive...

...Title Terms: **INJECTION** ;

International Patent Class (Main): **A61B-017/00** ...

... **A61B-017/04** ...

... A61B-017/12 ...

... A61B-017/132

International Patent Class (Additional): A61B-017/08 ...

... A61M-039/04

36/3,K/106

DIALOG(R)File 350:Derwent WPIX

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010298891 \*\*Image available\*\*

WPI Acc No: 1995-200151/199526

XRAM Acc No: C95-092487

XRPX Acc No: N95-157234

Sealing punctures in blood vessel walls to stop blood leakage - by releasing an amt. of blood into surrounding area, and injecting fibrin and thrombin solns. simultaneously to form a solidifying gel

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Number of Countries: 059 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9513748	A1	19950526	WO 94US13437	A	19941118	199526 B
US 5437292	A	19950801	US 93155457	A	19931119	199536
AU 9511843	A	19950606	AU 9511843	A	19941118	199538

Priority Applications (No Type Date): US 93155457 A 19931119

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9513748 A1 E 25 A61B-017/00

Designated States (National): AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU JP KG KP KR KZ LK LR LT LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA UZ VN

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ

US 5437292 A 10 A61B-017/00

AU 9511843 A A61B-017/00 Based on patent WO 9513748

Sealing punctures in blood vessel walls to stop blood leakage...

...by releasing an amt. of blood into surrounding area, and injecting fibrin and thrombin solns. simultaneously to form a solidifying gel

...Abstract (Basic): Sealing a puncture site (PS) in a blood vessel wall during endovascular or surgical procedure in which a tubular percutaneous delivery device (TPDD) is positioned adjacent to the site without penetrating the vessel, comprises: (a) applying occlusive compression to blood vessel at position upstream from the PS; (b) releasing the compression briefly to enable the site to release sufficient blood into surrounding tissue; (c) reapplying compression to stop blood release; (d) connecting a 1st syringe contg. fibrinogen-contg. soln. and a 2nd syringe contg. thrombin-contg. soln. with TPDD to mix the solns. prior delivery to the PS; and (e) actuating both syringes to introduce solns. simultaneously through mixing region to form gel into tissue adjacent to the site but not into the blood vessel; and opt. (j) disconnecting the syringes; (k) introducing a deflated, liq.-filled balloon appts. (BA) into and through the TPDD to...

...above the PS; (m) inflating the BA before the gel solidifies, so that the BA presses against the gel, and, in turn, the blood vessel, to speed closure of the PS; and then (n) deflating and removing the BA before gel finally solidifies...

...USE - Method is applied to stop leakage of blood from punctures in blood vessels, arterial and venous vessel walls from diagnostic and interventional cardiac and peripheral catheterisations and



**vascular** , endoscopic, and orthopaedic surgical **procedures** , by induced haemostasis. The latter, in more detail, include interventional radiology, atherectomy, stent, pacemaker, or...

- ...studies, in congenital heart disease or dialysis patients, or operations requiring percutaneous extracorporeal circulation. The **method** is independent of the age of the **vessel** , and can be applied to both adults and children...
- ...ADVANTAGE - The **method** requires **pressure** for only a few minutes, much less than with manual **pressure** only, partic. if the patient is being dosed with anticoagulants. No prosthesis or **apparatus** is put into the **vessel** , so that the **method** is free from the hazards and precautions, also considerable **compression** time still required for biodegradable collagen **plugs** . More than one **puncture** at a site, as when an **instrument** goes through both sides of a **vessel** , perhaps accidentally, can be **sealed** . No special **apparatus** is required beyond accurate positioning **equipment** for the TPDD e.g. a guide wire and ultrasound depth detector
- ...Abstract (Equivalent): **Sealing** a **puncture** site in the wall of a blood **vessel** comprises **inserting** a tubular delivery **device** adjacent to the **puncture** site without penetrating the **vessel** . Two **syringes** (A) and (B) contg. fibrinogen and thrombin respectively are prepd. **Occlusive compression** is applied to the blood **vessel** upstream of the **puncture** site and released briefly allowing a small amt. of blood into the tissue surrounding the site. The two **syringes** are **connected** to a mixing region, a semisolid gel is formed and delivered to the tissue adjacent to the **puncture** site. The gel solidifies around the site and **seals** it preventing further release of blood...
- ...ADVANTAGE - The **method** achieves haemostasis and **sealing** without requiring an excessive no. of special **apparatus** .

Title Terms: **SEAL** ;

International Patent Class (Main): **A61B-017/00**